



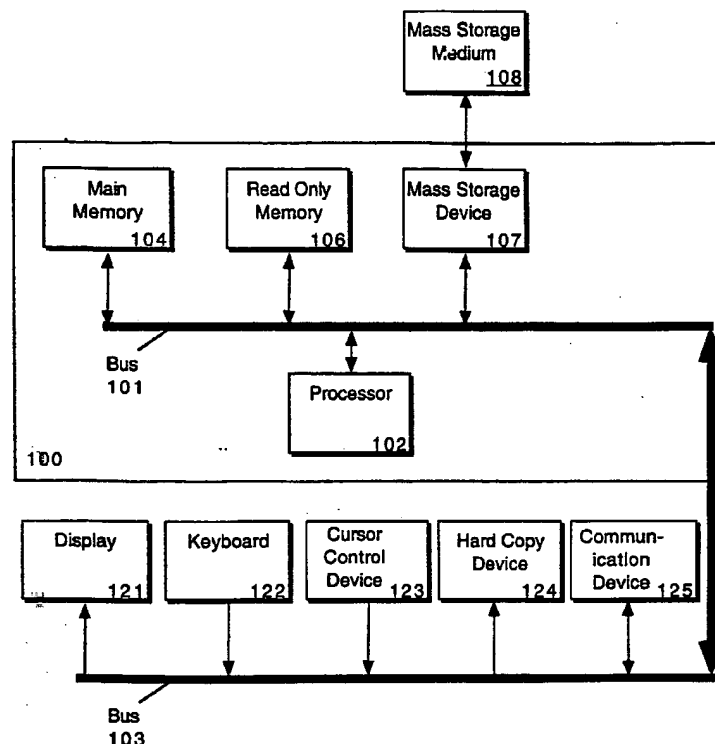
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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2002/0019825 A1**
(43) **Pub. Date: Feb. 14, 2002**(54) **METHOD AND APPARATUS FOR GROUP ACTION PROCESSING BETWEEN USERS OF A COLLABORATION SYSTEM****Publication Classification**(51) **Int. Cl.⁷** **G06F 17/00; G06F 15/16**(52) **U.S. Cl.** **707/102; 709/204**(76) **Inventors:** **BRIAN SMIGA**, SAN FRANCISCO, CA (US); **DENNIS BUCHHEIM**, PALO ALTO, CA (US); **THOMAS HAGAN**, BOSTON, MA (US); **DAVID WADHWANI**, SAN FRANCISCO, CA (US); **NORMAN SCOTT STORKEL**, PALO ALTO, CA (US)**Correspondence Address:****JEFFREY S SMITH**
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LOS ANGELES, CA 900251026(*) **Notice:** This is a publication of a continued prosecution application (CPA) filed under 37 CFR 1.53(d).(21) **Appl. No.:** **09/421,921**(22) **Filed:** **Oct. 20, 1999****Related U.S. Application Data**

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(57) **ABSTRACT**

A natural language-based information organization and collaboration tool for a computer system is disclosed. The present invention includes an apparatus and method for processing text expressions in a computer system, the apparatus including: 1) an object database defining an information object with an associated keyword; 2) a user input device for receiving an input text expression; 3) a parsing device for identifying the keyword in the input text expression, the parsing device including functions for linking the input text expression to the information object based on the keyword identified in the input text expression; and 4) a user output device for displaying to the user the identity of the information object to which the input text expression is linked. The apparatus of the present invention further includes supplemental information in the object database which is related to the information object, the user output device further including functions for displaying the supplemental information when a corresponding keyword is identified in the input text expression. The apparatus of the present invention further includes a method and apparatus for collaboration between users of a time and project management system.



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ABSTRACT:

A natural language-based information organization and collaboration tool for a computer system is disclosed. The present invention includes an apparatus and method for processing text expressions in a computer system, the apparatus including: 1) an object database defining an information object with an associated keyword; 2) a user input device for receiving an input text expression; 3) a parsing device for identifying the keyword in the input text expression, the parsing device including functions for linking the input text expression to the information object based on the keyword identified in the input text expression; and 4) a user output device for displaying to the user the identity of the information object to which the input text expression was linked. The apparatus of the present invention further includes supplemental information in the object database which is related to the information object, the user output device further including functions for displaying the supplemental information when a corresponding keyword is identified in the input text expression. The apparatus of the present invention further includes a method and apparatus for collaboration between users of a time and project management system.

CLAIMS:

1. A method of collaborating on projects, using a first instance of a messaging system and a second instance of the messaging system, the method comprising the computer implemented steps of: permitting entry of a message in the first instance of the messaging system; parsing the message to determine keywords; creating a header for the message based on the keywords; sending the message, using the header, to the second instance of the messaging system.
2. The method of claim 1, further comprising: filing a copy of the message in the first instance of the messaging system.
3. The method of claim 1, further comprising: receiving the message at the second instance of the messaging system; displaying a selection of reply options; generating a reply, including an automatic reply content based on the selection; creating a reply header for the reply based on the message content; and sending the reply, using the reply header, to the first instance of the messaging system.
4. The method of claim 3, further comprising: filing a copy of the message and the reply in the second instance of the messaging system.

5. The method of claim 3, wherein the selection of reply options include an affirmative, a negative, and an other.
6. The method of claim 5, further comprising: entering an entry into a first calendar and a first list based on the message in the first instance of the messaging system.
7. The method of claim 6, further comprising: entering an entry into a second calendar and a second list based on the message, in the second instance of the messaging system.
8. The method of claim 6 wherein said entry is entered in a pencil.
9. The method of claim 7 wherein said entry is entered in a pencil.
10. The method of claim 7, further comprising: continuing a collaboration when the selection is the other, until the selection is the affirmative or the negative; completing the collaboration when the reply option is the affirmative; and aborting the collaboration when the reply option is the negative.
11. The method of claim 10, wherein the step of aborting the collaboration comprises: deleting the entry in the first calendar and the first list in the first instance of the messaging system; and deleting the entry in the second calendar and the second list in the second instance of the messaging system.
12. The method of claim 10 wherein said step of completing the collaboration comprises: updating the entry in the first calendar and the first list based on the reply from the second instance of the messaging system; and updating the entry in the second calendar and the second list based on the reply.
13. The method of claim 12, wherein said step of updating comprises entering said entry using a pen.
14. The method of claim 13 wherein using the pen indicates using a different color from using the pencil.
15. The method of claim 10 wherein said step of continuing the collaboration comprises continuing a negotiation cycle, the negotiation cycle comprising: receiving the reply with the reply option of the other; displaying the selection of the reply options; generating a new reply, including a new automatic reply content based on the selection; creating a new header; and sending the new reply, using the new header.
16. The method of claim 15, further comprising the steps of: determining whether the new reply is the affirmative, the negative, or the other; executing another negotiation cycle if the reply is the other; and ending the collaboration if the reply is the affirmative or the negative.
17. The method of claim 1, wherein said first instance and said second instance of said messaging system are implemented on a peer-to-peer distributed system.
18. The method of claim 17, wherein said peer-to-peer distributed system comprises using a network to connect a plurality of computer systems.
19. A method of group action processing in a peer-to-peer collaboration system, comprising the computer implemented steps of: enabling entry of a message content; parsing said message content; determining a delegate for the message based on the message content; sending the message to the delegate.